

HfUi Yf`]a `Ncc`@Y]dn][ .`@Ok Y`H\Ya VU`i bX  
; YdUfX]b`HUf]fc`j YfghcfVYb

HfUi Yf`]a `Ncc`@Y]dn][ .`9]b`@Ok Y`i bX`Y]bY` ; YdUfX]b`ghYfVYb  
i bYfk UfhYh`"I fgUWXY`i b`\_Ufz`h]YfÄfnh]WXY`6Y\UbX`i b[  
YfZc`[ `cg"

9]b`gWk YfYf`GW`U[ `Z0f`XYb`Ncc`@Y]dn][ .`b`XYf`h]Yf]gWYb  
9f`YVb]gk Y`h`k i fXY`XYf`J Yf`i gh`nk Y]Yf`[ Y`]YVhYf`H]YfY`VY`\_Ubbh  
[ Y[ YVYb`"DZY[ Yf`a UW`hYb`Ua`A cf[ Yb`XYg`&(`"›`]`Y]bY`hfU[ ]gWY  
9bhXYW`i b[ `]`gck c`X`XYf`@Ok Y`H\Ya VU`U`g`Ui W`X]Y` ; YdUfX]b  
HUf]fc`k UfYb`hch`Ui Z[ YZ] bXYb`k cfXYb`"8]YgY`i bYfk UfhYhYb  
HcXYgZ`Ä`Y` \UVYb`b]W`h`bi f`X]Y`A ]hUfVY]hYf`XYg`Nccg` \Ufh  
[ YhfcZYbž`gcbXYfb`k YfZYb`Ui W` : fU[ Yb`ØVYf`X]Y  
< YfUi gZcfXYfi b[ Yb`]b`XYf`h]YfÄfnh]WXYb`J Yfgcf[ i b[ `Ui Z`

8Yf`Yfgh`Y]b`Ä`f][ Y`@Ok Y`H\Ya VU`k Uf`bcW`Y]b`† b[ Yf`i bX  
YbYf[ ]gWYf`6Yk c`bYf`XYg`Nccgž`XcW`gY]b`Ni ghUbX` \UhhY`g]W`]b  
XYb`HU[ Yb`j cf`gY]bYa`HcX`XfUgh]gW`j YfgW`YW`hYfh`"8]Y`DZY[ Yf  
i bX`H]YfÄfnhY`XYg`Nccg`VYa Yf`\_hYbž`XUgg`XYf`@Ok Y`ni bY`a YbX  
gWk ÄWYf`k i fXY`"BUW`Y]bYf`BUf`cgY`i bX`Y]bYf  
I`hfUgW`U`i bhYfgi W`i b[ `k i fXY`Y]XYf`XYf`J YfXUW`h`Ui ZY]bYb  
Hi a cf`VYgh`Äh][ h`Hfch`U`Yf`6Ya Ø`i b[ Yb`XYf`H]YfÄfnhY`\_cbbhY  
XUg`@YVYb`XYg`† b[ Yb`H]YfYg`b]W`h`[ YfYhhYh`k YfXYbž`k Ug`Z0f`U`Y  
6YhY]][ hYb`Y]bY`[ fc»Y`Ya ch]cbU`Y`6Y`Ughi b[ `XUfghY`h`

< YfUi gZcfXYfi b[ Yb`VY]`? fUb`\_`Y]hYb`j`c`b  
K`j`Xh]YfYb

9]b`Ä`b`]WXYg`GW`jW`gU`YfY]`hY`X]Y` ; YdUfX]b`HUf]fc`"A`h`]\fYb`Y`Z  
›\fYb`k Uf`g]Y`nk Uf`b]W`h`a`Y`f`X]Y`Øb[ ghYž`UVYf`Ui W`g]Y`ZUbX  
j`Y`ni`Zf0`]\f`9bXY`"8]Y`H]YfÄfnhY`k UfYb`VYfY]hg`k Y[ Yb`Yf`Ø`hYf

@YVYfk YfhY`VYgcf[ h'i bX`\UhhYb`Y]bY`6Y\UbX`i b[ `Y]b[ `Y`Y]hYh"  
@Y]XYf`ghY`hY`g]W\`Ui W\`Yf`\YfUi gZ`XUgg`X]Y`A U» bU\`a Yb`b]W\`h  
Ui gfY]W\`hYb"" K ]f`\UVYb`i a [ `Y\YbX`bUW\`J cf`]Y[ `Yb`XYf  
6`i hfYgi`hUhY`HUf]fc`Yb hgd fYW\`YbX`VY\UbXY`hZ`XcW\`Y]XYf`c\`bY  
9fZc`[ `Z`Yf`\_`AfhY`8f""5bXfYUg`6Yfb\UfXZ`XYf`VY\UbXY`bXY`H]YfUfnh  
XYg`Nccg""8]Y`dUh\c`c[ ]gW\`Yb`6YZ`bXY`gc``Yb`bi b`5i ZgW\`i gg  
ØVYf`X]Y[ `YbUi Yb`HcXYgi fgUW\`Yb`[ `YVYb"

8]Y`h]Yf`Āfnh]W\`Y`J Yf gcf[ i b[ `j cb`K ]`Xh]YfYb`]gh`b]W\`h`Y]bZUW`" `C Zh  
nY][ `Yb`X]YgY`H]YfY`Yfgh`gd`ĀhZ`k Ybb`g]Y`\_fUb`\_g]bX`cXYf  
GW\`a YfnYb`\UVYb""8 Ug`a UW\`h`Y]bY`ZfØ\`nY]h][ `Y`8]U[ bcgY`i bX  
6Y\UbX`i b[ `VYgcbXYfg`\YfUi gZcfXYfbXZ`k ]Y`8f""6Yfb\UfX  
Uba Yf`h""8]Y`H]YfY`g]bX`XUfUi Z`Ui g[ `Y`Y[ hZ`\fY`GW\`k ĀW\`Yb`b]W\`h  
ni`nY][ `YbZ`i a`i`b`]fYf`bUhØf`]W\`Yb`i a [ `YVi b[ `b]W\`h`U`g  
j Yf`Yhn`]W\`k U\`f[ `Ybca`a Yb`ni`k YfXYb""8]Yg`\_Ubb`ni`j YfnØ[ `YfhYb  
6Y\UbX`i b[ `Yb`ZØ\`fYbZ`X]Y`]a`gW\`]a`a ghYb`i: U``ZUhU`Y`i: c`[ `Yb  
\UVYb`\_ØbbYb"

8Yf`Ncc`@Y]dn][ `U`h]b`XYb`YhnhYb`Z\`fYb`j ]Y``ZØf`XYb`9f\`U`h  
gY`hYbYf`H]YfUfhYb`[ `YhUb""H\`Ya`VU`k Uf`Y]b`k ]W\`h][ `Yf`HY`]`X]YgYf  
6Ya`Ø\`i b[ `YbZ`i bX`gY]b`ZfØ\`nY]h][ `Yf`HcX`]gh`Y]b`F`ØW`gW\`U[ `ZØf  
X]Y`5fhYbj ]Y`ZU`h]a`Ncc""`b`XYf`DfYggYa`]hhY`]i b[ `k ]fX`Ui W\`  
XUfUi Z`\]b[ `Yk ]YgYbZ`XUgg`XYf`Ncc`U``Yg`]b`gY]bYf`A UW\`h`GhY\`YbXY  
[ `YhUb`\UhZ`i a`X]Y`@YVYbgei U`]hĀhXYf`H]YfY`ni`g]W\`Yfb"

8]YgYf`hfUi f][ `Y`J cfZU``k ]fZh`ni XYa`Y]bYb`GW\`UhhYb`Ui Z`XYb  
[ `YgUa`hYb`Ncc`@Y]dn][ ""8]Y`Ya`ch]cbU`Y`@UghZ`X]Y`X]Y`A`]hUfVY]hYf  
a`]h`XYa`J Yf`i gh`X]YgYf`VY]XYb`H]YfY`hfU[ `Yb`a`ØggYbZ`]gh  
i bYfa`Ygg`]W\`" `J ]Y`Y`j cb`]bYb`\UVYb`NY]h`i bX`9bYf[ ]Y`]bj Ygh]YfhZ  
i a`Y]bY`6Yn]Y\`i b[ `ni`XYb`H]YfYb`Ui Zni VUi Yb`i bX`X]YgY`ni  
VYhfYi Yb""8Yf`J Yf`i gh`Y]bYg`gc`W\`Yb`i: fYi bXYg`]gh`gW\`k Yf`ni  
j Yf`\_fUZhYbZ`i bUV\`Āb[ ][ `XUj cbZ`k ]Y`j ]Y`Y`H]YfY`bcW\`]a`Ncc`i a`g  
, VYf`YVYb`\_Āa`dZYb"

## 6`]W`\_]b`X]Y`Ni`\_i bZh`XYg`Nccg

8]Y`J YfUbhk cfh]W\`Yb`]b`@Y]dn][ `g]bX`bi b`[ `YZcfXYfhZ`X]Y  
9fZU\`fi b[ `Yb`Ui g`X]YgYb`hfU[ ]gW\`Yb`9fY][ `b]ggYb`ni`bi hnYbZ`i a

X]Y`DZY[ Y`i bX`6Y\UbX`i b[ `XYf`H]YfY`ni `j YfVYggYfb`"8 ]Y  
<YfUi gZcfXYfi b[ ž`\_fUb`\_Y`K `]Xh]YfY`fYW\hnY]h[ `ni `Yf`\_YbbYb`i bX  
YbhgdYfYW\YbX`ni `UbXY`bž`V`Y]Vh`Y]bY`nYbhfU`Y`5i Z[ UVY`" `Δ`fYb  
9]bgUhn`k YfXYb`g]Y`g]W\Yf`]W\`Yfk`Y]hYfb`a ØggYbž`i a ` \_ØbZh][  
ZfØ\nY]h[ Yf`Ui Z`gc`W\Y`[ Ygi bX\Y]h`]W\Yb`<YfUi gZcfXYfi b[ Yb  
fYU[ ]YfYb`ni ` \_ØbbYb`"

ϕg[ YgUa h`\_Ubb`X]YgYf`J cfZU`"U`g`A U\bi b[ `Ub[ YgY\Yb`k YfXYbž  
XUgg`hfc`h`U`Yf` : cfhgW\ f]hhY`]b`XYf`H]YfdZY[ Y`XUg`K c\`XYf`H]YfY  
i bX`]\fY` ; Ygi bX\Y]h`gh`AbX][ Yf`5i Za Yf\_gUa`\_Y]h`VYXUfZ`"8Yf`Ncc  
@Y]dn][ `VYhcbhž`XUgg`X]Y`9fZU\fi b[ Ybž`X]Y`Yhnh[ Ya UW`h`k`i fXYbž  
]b`X]Y`ni \_ØbZh][ Y`5fVY]h`Y]bZ]Y»Yb`a ØggYbž`i a `XYb`[ Y`]YVhYb  
H]YfYb`Y]b`k`Y]hYfYg`@YVYb`]b`G]W\Yf\Y]h`i bX`K`c\`VYZ]bXYb`ni  
Yfa Ø[ `]W\Yb`"

< ]bhYf[ fi bX`XYf`H]Yf\U`hi b[ `]a`Ncc

8]Y`<U`hi b[ `j`cb`K`]Xh]YfYb`]b`Nccg`]gh`Y]b`\_ca`d`YI Yg`H\Ya Už  
XUg`nU\`fY]W\Y`Yh\]gW\Yž`[ Ygi bX\Y]h`]W\Y`i bX`V]c`c[ `]gW\Y  
5gdY`\_hY`i a`ZUggh`"Nccg`k`Y`hk`Y]h`ghY\Yb`]b`XYf`?f]h]\_ž`k`Ybb`Yg`i a  
XUg`K`c\`]\fYf`H]YfY`[ Y`h`"ϕ`XYb`YhnhYb`Δ\fnY\`bhYb`\Uh`g]W\  
YXcW\`Y]b`XY`i`h`]W\Yf`K`UbXY`j`c`nc[ Yb.`J]Y`Y`H]YfdUf`\_g`\UVYb  
g]W\`XYf`Ufh[ YfYW\hYb`<U`hi b[ `i`bX`XYa`B`Uhi`fgW`i`hn  
j`YfgW`f]YVYb`"8i`fW`Dfc[ fUa`a`Y`ni`f`Ni`W`h`g`Y`h`Yb`Yf`5fhYbž  
5i`Z`\_`À`fi b[ `XYf`6Ygi`W`Yf`i`bX`Ni`gUa`a`YbUfVY]h`a`]h  
B`Uhi`fgW`i`hncf[ Ub]gUh]cbYb`ghfYVYb`Nccg`Ubž`]\fY`F`c`Y`U`g  
6]Xi`b[ `gl`i`bX` :`cf`gW`i`b[ `g]bgh]hi`h]cb`ni`ZYgh][ Yb`"

8Ug`K`c\`XYf`H]YfY`\Uh`J`c`ff`Ub[ `/XYbbcW\`[ `]Vh`Yg  
i`bj`cf\Yf[ YgY\YbY`a`YX]n]b]gW\Y`DfcV`Ya`Yž`X]Y`Ui`W\`VY][ `i`h  
VYUi`Zg]W\h][`hYb`H]YfYb`Y]bhfYhYb`\_ØbbYb`"8]Y`h]Yf`À`fnh`]W\Y  
J`Yfgcf[ `i`b[ `i`bX`X]Y` ,`VYfk`UW`i`b[ `j`cb`H]YfYb`g]bX`YbhgW\Y]XYbXž  
i`a`a`Ø[ `]W\Y`9f`\_fUb`\_i`b[ Yb`ZfØ\nY]h[ `ni`Yf`\_YbbYb`"6YgcbXYfg  
VY][`K`]Xh]YfYb`]gh`Yg`c`Zh`gW`k`]Yf][`ž`Gma`dhca`Y`ni`Yf`\_YbbYbž`XU  
X]YgY`H]YfY`]bgh]b`\_h]j`j`Yfgi`W\Ybž`GW`k`ÀW`Y`ni`j`YfVYf[ Ybž`i`a`]b  
ZfY]Yf`K`]XVU\`b`b]W`h`ni`f`6Yi`hY`ni`k`YfXYb`"@Ui`h`XYa`K`cf`X  
5ggcW]Uh]cb`c`Z`Nccg`UbX`5ei`Uf]i`a`g`f`K`5N5E\`UVYb`j`]Y`Y`Nccg`]b  
XYb`YhnhYb`Δ\`fYb`]b`X]Y`J`YfVYggYfi`b[ `]\fYf`h]Yf`À`fnh`]W\Yb`

9]bf]W\ hi b[ gghUbXUfXg']bj Ygh]Yfhž'k Ug'ni 'VYggYfYb  
6Y\UbX'i b[ gYf[ YVb]ggYb'ZØ\fh"

## 5 \_hi Y`Y`H]YfgW\ i hngHUh]gh]\_Yb

@Ui hi6Yf]W\ hYb`XYg`K cf`X`5b]a U`DfchYWh]cb`nY][ Yb`U\_hi Y`Y`  
GhUh]gh]\_Ybž`XUgg`g]W\`XUg`h]Yf`Āfnh`]W\Y`A UbU[ Ya Ybh]b`Nccg  
k Y`hk Y]h] YfVYggYfh`\Uh"8Yf`6Yf]W\h`VY`Y[ hž`XUgg`a Y`f`U`g`+\$i  
XYf`[ fc» Yb`Nccg`ØVYf`gdYn]U`g]YfhY`H]Yf`ĀfnhY`j YfZØ[ Ybž`X]Y  
fY[ Y`a`Ā`][ `: cfhV]`Xi b[ Yb`]b`6YfY]W\Yb`k ]Y`Ncc!H]Yfa`YX]n]b`i bX  
H]Yfj Yf\U`hYbgZc`fgW\ i b[ `UVgc`j ]YfYb`"8 ]YgY`: UW\`\_Yb`bh]ggY`g]bX  
k ]W\h][ ži a`9f`\_fUb`\_i b[ Yb`k ]Y`X]Yž`X]Y`VY]`H\Ya`VU`i bX`HUf]fc  
ZYgh[ YghY`h`k i fXYbž`VYggYf`VY\UbXY`b`i bX`j cfVYi [ Yb`ni  
\_ÖbbYb"

⊖8Yi hgW\`UbX`gUb`\_X]Y`NU\`XYf`[ Ya Y`XYhYb`HcXYgZĀ`Y`i bhYf  
K ]`Xh]YfYb`]b`Nccg]b`XYb`Y`hnhYb`ZØbZ`J\`fYb`i a`%` i ž`k Ug`Ui Z  
X]Y`Zc`fhgW\`fY]hYbXYb`J YfVYggYfi b[ Yb`]b`XYf`a`YX]n]b]gW\Yb  
J Yfgcf[ i b[ `i bX`XYb`@YVYbgVYX]b[ i b[ Yb`ZØf`H]YfY`\]bXYi hYh"  
Hfch`n`U`Y`f`: cfhgW\`f]hY`V`Y]Vh`XYf`GW\`i h`i bX`XUg`K c\`Yf[ Y\Yb  
XYf`H]YfY`Y]bY`<YfUi`gZc`fXYfi b[ ži bX`Y`XY`HfU[ ÖX]Yž`k ]Y]a`Ncc  
@Y]dn][ ži bhYfghfY]W\h`X]Y`6YXYi hi b[ `\_cbh]bi ]Yf`]W\Yf  
J YfVYggYfi b[ Yb`i bX`\cW\ei U`Z]n]YfhYf`h]Yf`Āfnh`]W\Yf`J Yfgcf[ i b[ "

## NY]W\ Yb`XYg`K UbXY`g`]b`XYf`Nccdc`]h]\_

8]Y`J cfZĀ`Y`]a`Ncc`@Y]dn][ `k YfZYb`Ui W\`Y]b`@W\h`Ui ZX]Y  
8]g`\_i gg]cbYb`fi bX`i a`Nccg`i bX`X]Y`<U`hi b[ `j`cb`K ]`Xh]YfYb`"8 ]Y  
[ YgY`gW\`UZh`]W\Y`K U\fbY\`a i b[ `j`Yf`ĀbXYfh`g]W\`/]a`a`Yf`a`Y\`f  
A`YbgW\Yb`Zc`fXYfb`HfUbgdUfYbn`ØVYf`X]Y`@YVYbgVYX]b[ i b[ Yb  
i bX`X]Y`; Ygi bX\Y]hgj Yfgcf[ i b[ `XYf`H]YfY`"⊖]h]Uh]j Yb`k ]Y`X]Y  
9i fcdYUb`5ggcW]Uh]cb`cZ`Nccg`UbX`5ei Uf]U`f95N5Ě`UfVY]hYb  
U\_h]j`XUfUbž`X]Y`GhUbXUfXg`]b`XYf`H]Yf\U`hi b[ `k`Y]hYf`ni`Yf\Ö\Yb  
i bX`gYhnYb`Ui ZJ`Yfa`]h`i b[ `i bX`6`]Xi b[ `ZØf`X]Y`² ZYb`h]W\`\_Y]h`"

⊖XYf`Dc`]h]\_[ UV`Yg`]b`XYb`Y`hnhYb`J\`fYb`6YghfYVi b[ Ybž`X]Y  
[ YgYhn`]W\Yb`5bZc`fXYfi b[ Yb`Ub`X]Y`H]Yf\U`hi b[ `ni`j`YfgW\`ĀfZYbž  
i a`X]Y`J cfUi`ggYhni b[ Yb`ZØf`X]Y`DZY[ Y`i bX`XUg`K c\`XYf`H]YfY`]b

Nccg'ni 'j YfVYggYfb" '8 ]YgY' [ YgYh`]WXYb'F U\ a YbVYX]b[ i b[ Yb  
g]bX`YbhgWXY]XYbXž'i a 'g]WXYfni ghY`Ybž'XUgg'U`Y`Nccg'XYb  
6YXØfZb]ggYb`XYf'H]YfY' [ YfYW`h'k YfXYb'i bX' [ `Y]W`nY]h][ `]\fY  
6]`Xi b[ g!'i bX`9f\U`hi b[ ga ]gg]cb`YfZØ`Yb"

8YhU]`g

6Ygi WXYb`G]Y`i bg`Ui Z.`b!U[ "XY